

IN THE CLAIMS

1. (currently amended) An immunogenic composition comprising:

~~an isolated a GBS Group B streptococcus (GBS) saccharide antigen and at least two GBS polypeptide antigens, wherein said GBS saccharide antigen comprises a saccharide selected from GBS serotype Ia, Ib, and III, and wherein said~~

~~at least two isolated GBS polypeptide antigens comprise a combination of at least two polypeptide or fragments thereof selected from the antigen group consisting of:~~

~~GBS 80 set forth as as represented by SEQ ID NO:2,~~

~~immunogenic fragments of GBS 80 comprising at least 7 consecutive amino acids of SEQ ID NO:2,~~

~~GBS 91 set forth as as represented by SEQ ID NO:4,~~

~~immunogenic fragments of GBS 91 comprising at least 7 consecutive amino acids of SEQ ID NO:4,~~

~~GBS 104 set forth as as represented by SEQ ID NO:6,~~

~~immunogenic fragments of GBS 104 comprising at least 7 consecutive amino acids of SEQ ID NO:6,~~

~~GBS 147 set forth as as represented by SEQ ID NO:8,~~

~~immunogenic fragments of GBS 147 comprising at least 7 consecutive amino acids of SEQ ID NO:8,~~

~~GBS 173 set forth as as represented by SEQ ID NO:10,~~

~~immunogenic fragments of GBS 173 comprising at least 7 consecutive amino acids of SEQ ID NO:10,~~

~~GBS 276 set forth as as represented by SEQ ID NO:12,~~

immunogenic fragments of GBS 276 comprising at least 7 consecutive amino acids of SEQ ID NO:12,

GBS 305 set forth as ~~as represented by~~ SEQ ID NO:14,
immunogenic fragments of GBS 305 comprising at least 7 consecutive amino acids of SEQ ID NO:14,

GBS 313 set forth as ~~as represented by~~ SEQ ID NO:16,
immunogenic fragments of GBS 313 comprising at least 7 consecutive amino acids of SEQ ID NO:16,

GBS 322 set forth as ~~as represented by~~ SEQ ID NO:18,
immunogenic fragments of GBS 322 comprising at least 7 consecutive amino acids of SEQ ID NO:18,

GBS 328 set forth as ~~as represented by~~ SEQ ID NO:20,
immunogenic fragments of GBS 328 comprising at least 7 consecutive amino acids of SEQ ID NO:20,

GBS 330 set forth as ~~as represented by~~ SEQ ID NO:22,
immunogenic fragments of GBS 330 comprising at least 7 consecutive amino acids of SEQ ID NO:22,

GBS 338 set forth as ~~as represented by~~ SEQ ID NO:24,
immunogenic fragments of GBS 338 comprising at least 7 consecutive amino acids of SEQ ID NO:24,

GBS 358 set forth as ~~as represented by~~ SEQ ID NO:26,
immunogenic fragments of GBS 358 comprising at least 7 consecutive amino acids of SEQ ID NO:26,

GBS 361 ~~set forth as as represented by~~ SEQ ID NO:28,
immunogenic fragments of GBS 361 comprising at least 7 consecutive amino acids of SEQ ID NO:28,

GBS 404 ~~set forth as as represented by~~ SEQ ID NO:30,
immunogenic fragments of GBS 404 comprising at least 7 consecutive amino acids of SEQ ID NO:30,

GBS 656 ~~set forth as as represented by~~ SEQ ID NO:32,
immunogenic fragments of GBS 656 comprising at least 7 consecutive amino acids of SEQ ID NO:32,

GBS 690 ~~set forth as as represented by~~ SEQ ID NO:34,
immunogenic fragments of GBS 690 comprising at least 7 consecutive amino acids of SEQ ID NO:34, and

GBS 691 ~~set forth as as represented by~~ SEQ ID NO:36, and
immunogenic fragments of GBS 691 comprising at least 7 consecutive amino acids of SEQ ID NO:34.

2. (currently amended) The immunogenic composition of claim 1, wherein ~~the at least two isolated said~~ GBS polypeptide antigens are polypeptides of a further comprise a GBS polypeptide or a fragment thereof of serotype serogroup II GBS bacterium.

3. (currently amended) The immunogenic composition of claim 1, wherein one of the at least two isolated said GBS polypeptide antigens antigen combination comprises GBS 80 ~~set forth as represented by~~ SEQ ID NO:2 or the immunogenic a fragment of GBS 80 thereof.

4. (currently amended) The immunogenic composition of claim 3 which further comprises; ~~wherein said GBS polypeptide antigens comprise a combination of two GBS antigens or fragments thereof selected from the group consisting of~~

(1) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 91 set forth as ~~as~~
~~represented by~~ SEQ ID NO:4,

(2) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 104 set forth as ~~as~~
~~represented by~~ SEQ ID NO:6,

(3) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 147 set forth as ~~as~~
~~represented by~~ SEQ ID NO:8,

(4) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 173 set forth as ~~as~~
~~represented by~~ SEQ ID NO:10,

(5) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 276 set forth as ~~as~~
~~represented by~~ SEQ ID NO:12,

(6) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 305 set forth as ~~as~~
~~represented by~~ SEQ ID NO:14,

(7) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 313 set forth as ~~as~~
~~represented by~~ SEQ ID NO:16,

(8) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 322 set forth as ~~as~~
~~represented by~~ SEQ ID NO:18,

(9) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 328 set forth as ~~as~~
~~represented by~~ SEQ ID NO:20,

(10) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 330 set forth as ~~as~~
~~represented by~~ SEQ ID NO:22,

(11) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 338 set forth as ~~as represented by~~ SEQ ID NO:24,

(12) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 358 set forth as ~~as represented by~~ SEQ ID NO:26,

(13) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 361 set forth as ~~as represented by~~ SEQ ID NO:28,

(14) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 404 set forth as ~~as represented by~~ SEQ ID NO:30,

(15) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 656 set forth as ~~as represented by~~ SEQ ID NO:32,

(16) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 690 set forth as ~~as represented by~~ SEQ ID NO:34, and

(17) ~~GBS 80 as represented by SEQ ID NO:2 and~~ GBS 691 set forth as ~~as represented by~~ SEQ ID NO:36.

5. (currently amended) The immunogenic composition of claim 4, wherein said combination is selected from the group consisting of (1) GBS 80 set forth as ~~as represented by~~ SEQ ID NO:2 and GBS 338 set forth as ~~as represented by~~ SEQ ID NO:24; (2) GBS 80 set forth as ~~as represented by~~ SEQ ID NO:2 and GBS 361 set forth as ~~as represented by~~ SEQ ID NO:28, (3) GBS 80 set forth as ~~as represented by~~ SEQ ID NO:2 and GBS 305 set forth as ~~as represented by~~ SEQ ID NO:14, (4) GBS 80 set forth as ~~as represented by~~ SEQ ID NO:2 and GBS 328 set forth as ~~as represented by~~ SEQ ID NO:20, (5) GBS 80 set forth as ~~as represented by~~ SEQ ID NO:2 and GBS 690 set forth as ~~as represented by~~ SEQ ID NO:34, (6) GBS 80 set forth as ~~as represented by~~ SEQ ID NO:2 and GBS 691 set forth as ~~as represented by~~ SEQ ID NO:36, and

(7) GBS 80 ~~set forth as as represented by~~ SEQ ID NO:2 and GBS 147 ~~set forth as as represented by~~ SEQ ID NO:8.

6. (currently amended) The immunogenic composition of claim 4, wherein said combination comprises GBS 80 ~~set forth as as represented by~~ SEQ ID NO:2 and GBS 691 ~~set forth as as represented by~~ SEQ ID NO:36.

7. (original) The immunogenic composition of claim 1, wherein said composition comprises a combination of at least three GBS polypeptide antigens.

8. (currently amended) The immunogenic composition of claim 7, wherein said combination comprises GBS 80 ~~set forth as as represented by~~ SEQ ID NO:2 and GBS691 ~~set forth as as represented by~~ SEQ ID NO:36.

9. (currently amended) The immunogenic composition of claim 7, wherein said combination comprises GBS 80 ~~set forth as as represented by~~ SEQ ID NO:2.

10. (original) The immunogenic composition of claim 1, wherein at least one GBS polypeptide antigen is covalently linked to the GBS saccharide antigen.

11. (original) The immunogenic composition of claim 1, wherein said GBS saccharide antigen is covalently linked to a carrier protein.

12. (original) The immunogenic composition of claim 11, wherein said carrier protein is selected from the group consisting of tetanus toxoid, diphtheria toxoid, *N. meningitides* outer membrane protein, heat shock protein, pertusis protein, protein D from *H. influenzae*, and toxin A or B from *C. difficile*.

13. (original) The immunogenic composition of claim 12, wherein said carrier protein is selected from the group consisting of tetanus toxoid and diphtheria toxoid.

14. (original) The immunogenic composition of claim 13, wherein said carrier protein is a diphtheria toxoid.

15. (original) The immunogenic composition of claim 14, wherein said diphtheria toxoid is CRM197.

16. (withdrawn) A method for the therapeutic or prophylactic treatment of GBS infection in an animal susceptible to GBS infection comprising administering to said animal a therapeutic or prophylactic amount of the immunogenic composition of claim 1.

17. (withdrawn – currently amended) A method for the manufacture of a medicament for raising an immune response against GBS comprising combining:

an isolated Group B streptococcus (GBS) saccharide antigen selected from GBS serotype Ia, Ib, and III; a GBS saccharide antigen and

at least two isolated GBS polypeptide antigens selected from the group consisting of:

GBS 80 set forth as SEQ ID NO:2,

immunogenic fragments of GBS 80 comprising at least 7 consecutive amino acids of SEQ ID NO:2,

GBS 91 set forth as SEQ ID NO:4,

immunogenic fragments of GBS 91 comprising at least 7 consecutive amino acids of SEQ ID NO:4,

GBS 104 set forth as SEQ ID NO:6,

immunogenic fragments of GBS 104 comprising at least 7 consecutive amino acids of SEQ ID NO:6,

GBS 147 set forth as SEQ ID NO:8,

immunogenic fragments of GBS 147 comprising at least 7 consecutive amino acids of SEQ ID NO:8,

GBS 173 set forth as SEQ ID NO:10,

immunogenic fragments of GBS 173 comprising at least 7 consecutive amino acids of SEQ ID NO:10,

GBS 276 set forth as SEQ ID NO:12,

immunogenic fragments of GBS 276 comprising at least 7 consecutive amino acids of SEQ ID NO:12,

GBS 305 set forth as SEQ ID NO:14,

immunogenic fragments of GBS 305 comprising at least 7 consecutive amino acids of SEQ ID NO:14,

GBS 313 set forth as SEQ ID NO:16,

immunogenic fragments of GBS 313 comprising at least 7 consecutive amino acids of SEQ ID NO:16,

GBS 322 set forth as SEQ ID NO:18,

immunogenic fragments of GBS 322 comprising at least 7 consecutive amino acids of SEQ ID NO:18,

GBS 328 set forth as SEQ ID NO:20,

immunogenic fragments of GBS 328 comprising at least 7 consecutive amino acids of SEQ ID NO:20,

GBS 330 set forth as SEQ ID NO:22,

immunogenic fragments of GBS 330 comprising at least 7 consecutive amino acids of SEQ ID NO:22,

GBS 338 set forth as SEQ ID NO:24,

immunogenic fragments of GBS 338 comprising at least 7 consecutive amino acids of SEQ ID NO:24,

GBS 358 set forth as SEQ ID NO:26,

immunogenic fragments of GBS 358 comprising at least 7 consecutive amino acids of SEQ ID NO:26,

GBS 361 set forth as SEQ ID NO:28,

immunogenic fragments of GBS 361 comprising at least 7 consecutive amino acids of SEQ ID NO:28,

GBS 404 set forth as SEQ ID NO:30,

immunogenic fragments of GBS 404 comprising at least 7 consecutive amino acids of SEQ ID NO:30,

GBS 656 set forth as SEQ ID NO:32,

immunogenic fragments of GBS 656 comprising at least 7 consecutive amino acids of SEQ ID NO:32,

GBS 690 set forth as SEQ ID NO:34,

immunogenic fragments of GBS 690 comprising at least 7 consecutive amino acids of SEQ ID NO:34,

GBS 691 set forth as SEQ ID NO:36, and

immunogenic fragments of GBS 691 comprising at least 7 consecutive amino acids of SEQ ID NO:34

~~wherein said GBS saccharide antigen comprises a saccharide selected from GBS serotype Ia, Ib, and III, and wherein said GBS polypeptide antigens comprise a combination of at least two~~

~~polypeptide or fragments thereof selected from the antigen group consisting of GBS 80 as represented by SEQ ID NO:2, GBS 91 as represented by SEQ ID NO:4, GBS 104 as represented by SEQ ID NO:6, GBS 147 as represented by SEQ ID NO:8, GBS 173 as represented by SEQ ID NO:10, GBS 276 as represented by SEQ ID NO:12, GBS 305 as represented by SEQ ID NO:14, GBS 313 as represented by SEQ ID NO:16, GBS 322 as represented by SEQ ID NO:18, GBS 328 as represented by SEQ ID NO:20, GBS 330 as represented by SEQ ID NO:22, GBS 338 as represented by SEQ ID NO:24, GBS 358 as represented by SEQ ID NO:26, GBS 361 as represented by SEQ ID NO:28, GBS 404 as represented by SEQ ID NO:30, GBS 656 as represented by SEQ ID NO:32, GBS 690 as represented by SEQ ID NO:34, and GBS 691 as represented by SEQ ID NO:36.~~

18. (currently amended) The immunogenic composition of claim 1, wherein the at least two isolated GBS polypeptide antigens are GBS 80 set forth as ~~as represented by~~ SEQ ID NO:2 and GBS 322 as represented by SEQ ID NO:18.

19. (currently amended) The immunogenic composition of claim 18 wherein the GBS saccharide antigen comprises a ~~the~~ GBS serotype Ia saccharide antigen.

20. (previously presented) The immunogenic composition of claim 18 further comprising a diphtheria toxoid.

21. (previously presented) The immunogenic composition of claim 20 wherein the diphtheria toxoid is CRM197.

22. (previously presented) The immunogenic composition of claim 19 further comprising a diphtheria toxoid.

23. (previously presented) The immunogenic composition of claim 22 wherein the diphtheria toxoid is CRM197.